The listing of claims presented below replaces all prior versions and listing of claims in the application.

Listing of claims

Claims 1-25 (Cancelled)

26. (Currently Amended) A method of producing a transgenic strawberry plant comprising inoculation of tissue of a strawberry plant ~~plants~~, with *Agrobacterium thumefaciens* which comprises at least one vector comprising at least one gene of interest wherein in the step of transformation a stage wise co-cultivation of explants is used which comprises the steps of:

a) cutting leaves into individual leaf disks for preparing explants;

b) cutting one or more narrow strips having a width not exceeding 2 mm from the leaf disks for the inoculation of the leaf disks;

c) inoculating and co-cultivating the leaf disk obtained in step b) with the bacterial suspension and subsequently removing excess bacteria and incubating the leaf disk at 25-28°C in darkness;

d) forming first-stage explants having a width from 1 to 3 mm from the side of the first section of leaf disks by step b) incubating in darkness first-stage explants in a 23-25°C and the leaf disks in a 25-28°C [[and]]

e) forming from 2 to 5 next-stages explants having a width from 1 to 3 mm with a periodicity of 1 to 5 days by independent steps, selecting prepared

explants that have a lowered frequency of necrotic reactions and

f) allowing the selected explants to develop into a transgenic strawberry plant.

27. (Previously Presented) The method according to claim 26, wherein the vector contains genetic material that codes for at least one target protein.

28. (Previously Presented) The method according to claim 26, wherein the vector contains genetic material that codes for at least one protein which contributes to lowering necrosis in the step of transformation.

29. (Previously Presented) The method according to claim 26, wherein the vector contains genetic material that codes for at least one protein which enhances plant resistance to phytopathogens and which is selected from the group consisting of PR-l, PR-2, PR-3, PR-4, and PR-5.

30. (Previously Presented) The method according to claim 26, wherein the vector contains genetic material that codes for a combination of proteins according to claims 27, 28 or 29.

31. (Previously Presented) The method according to claim 29 wherein the vector contains genetic material that codes for thaumatin, belonging to PR-5.

32. (Currently amended) The method according to claim 29, wherein genetic material

codes resistance to fungi selected from the group consisting of *Phytophthora fragariae, Verticillium alboatrrum, Mycospaerella fragariae, Diplocarpon earliana, Dendxrophoma obscurans, Botrytis cinerea,* and *Sphaerotheca humul* ~~Phytophthora fragariae, Verticillium alboatrrum, Mycospaerella fragariae, Diplocarpon earliana, Dendxrophoma obscurans, Botrytis cinerea, and Sphaerotheca humuli~~ .

33. (Cancelled)

34. (Cancelled)

35. (Previously Presented) The method according to claim 26, wherein the strawberry plant is selected from the group of varieties: Selekta, Chambly, Chandler, Oka, Yamaska, L'Acadie, L'Authentique Orleans, Rosalyne, Roseberry, Saint-Pierre, Donna, Enzed Levin, Enzed Lincoln, Vilanova, Durval, Redcrest, Bountiful, Redgem, Pelican, Primtime, Mohawk, Latestar, Winoma, and Feyerverk.

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Currently Amended) The method according to claim [[26]] 50, wherein the concentration of TDZ is 5 mg/l.

44. (Cancelled)

45. (Currently Amended) The method according to claim [[26]] 50, wherein the concentration of IBA is 0.3 mg/l.

46. (Cancelled)

47. (Currently Amended) The method according to claim [[26]] 50, wherein the concentration of kanamycin is 50 mg//l.

48. (Currently Amended) The method according to claim [[26]] 50, wherein the ratio of the section length and the explant surface area is from 0.1 mm/mm^2 to 2 mm/mm^2.

49. (Currently Amended) The method according to claim [[26]] 50, wherein the ratio of

the section length and the explant surface area is 0.5 mm/mm^2.

50. (Currently amended) A method for producing a transgenic strawberry, comprising treating a tissue of a strawberry plant with *Agrobacterium tumefaciens* which comprises at least one vector comprising at least one gene of interest wherein the method comprises the steps of:

a) cutting leaves into individual leaf disks for preparing explants;

b) cutting one or more narrow strips having a width not exceeding 2 mm from the leaf disks for the inoculation of the leaf disks;

c) inoculating and co-cultivating the leaf disk obtained in step b) with the bacterial suspension and subsequently removing excess bacteria;

d) forming first-stage explants having a width from 1 to 3 mm from the side of the first section of leaf disks by step b);

e) forming from 2 to 5 next-stage explants having a width from 1 to 3 mm with a periodicity of 1 to 5 days by independent steps; [[and]]

f) transferring the explants onto selection and regeneration medium comprising from 1 to 10

mg/ml TDZ, from 0 to 2 mg/l IBA and from 10 to 100 mg/l kanamycin

g) selecting prepared explants that have a lowered frequency of necrotic reactions; and

h) allowing the selected explants to develop into a transgenic

strawberry plant.

51. (Currently Amended) A method of producing a transgenic strawberry, comprising treating the tissue of a strawberry plant with *Agrobacterium tumefaciens* which comprises at least one vector comprising at least one gene of interest, wherein the method comprises the steps of:

(i) selecting at least one leaf disk from said strawberry plant;

(ii) separating a segment from the disk to allow bacteria access;

(iii) inoculating the leaf disk with agrobacteria and subsequently removing excess agrobacteria;

(iv) excising explant from the inoculated disk and wherein the remainder of the inoculated disk is inoculated for 1 to 5 days to allow subsequent inoculation with agrobacteria before excising 2 to 5 further explants;

(v) transferring the explant excised in step (iv) onto selection and regeneration media comprising from 1 to 10 mg TDZ, from 0 - 0.3mg lBA, and from 10 to 100 mg kanamycin;

(vi) selecting prepared explants that have a lowered frequency of necrotic reactions; and

(vii) allowing the selected explants to develop into a transgenic strawberry plant[[s]].